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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/585,755	06/14/2007	Hyung-Weon Park	678-2691 PCT US (P13058)	1474
66547 7590 06/10/2011 THE FARRELL LAW FIRM, P.C. 290 Broadhollow Road Suite 210E Melville, NY 11747			EXAMINER PAN, YUWEN	
			ART UNIT 2618	PAPER NUMBER
			MAIL DATE 06/10/2011	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/585,755	<b>Applicant(s)</b> PARK ET AL.	
	<b>Examiner</b> YUWEN PAN	<b>Art Unit</b> 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 11 March 2011.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) 1-31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 32-36 is/are rejected.
- 7) ☒ Claim(s) 37-42 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

***Response to Arguments***

1. Applicant's arguments, see applicant's Remarks, filed on 3/21/11, with respect to the rejection(s) of claim(s) 32 under 35 USC 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Piriapoksombut et al (US20080261650A1, hereinafter Piri) and Yu (US007272413A1).

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Piri in view of Yu.

Per claim 32, Piri discloses a multimode/multiband mobile station (see figure 1, item 104B, GPS, CDMA and TDMA) comprising: a switch module (figure 3 and item 309) for performing a switching operation for selecting a mode and band to be received among multiple modes and multiple bands based on a predetermined control (para. 50 and 52); receivers, each for receiving its own mode/band signal among multimode/multiband signals based on the switching operation (see figure 3A and item 302A); mixers each for down converting the received signal using a local frequency corresponding to the mode and band to be received (see figure 3B and 336); a baseband processing module (see figure 3A and item 306A) for controlling

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a receiver corresponding to the mode and band to be received among the receivers based on a predetermined control, baseband-processing the down converted reception signal, and outputting a baseband signal by classifying the baseband signal for each mode (see para. 51 and 52); and the baseband processing module for outputting a control signal for receiving a signal of the mode and band to be received, controlling the local frequency to a local frequency corresponding to the mode and band to be received, and demodulating the baseband signal for each mode through a modem for each mode (see para. 0068). Piri does not teach a modem module. Yu teaches the modem module for multimode communication as part of the baseband processor (see column 4 and lines 17-25). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Yu with Piri for better supporting the selection modes of multi-band.

Per claim 33, Piri further teaches that the multiple modes and multiple bands comprise bands of a WCDMA mode. Abdelgany teaches such feature (figure 1 and item 104B).

Per claim 34, Piri further teaches that the receivers comprise: WCDMA receivers for receiving bands of the WCDMA mode; GSM receivers for receiving bands of the GSM mode; and WCDMA/GSM combined receivers for receiving common bands of the WCDMA and GSM modes (see figure 5 and para. 0040).

4. Claims 35 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Piri and Yu in further view of Miyano et al (US20070026827A1, hereinafter Miyano).

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Per claim 35, Piri further teaches the switch module comprises: a first antenna switch for performing switching for selecting a reception mode and frequency band to be received among the bands of the WCDMA mode and the bands of the GSM mode based on a predetermined control (see figure 3A, item 309, para. 0068); a band selection (see figure 3A, item 310) switch for selecting a frequency band of the GSM mode when the reception mode is selected as the GSM mode. Piri does not expressly teach a second antenna switch for selecting whether WCDMA diversity reception is performed when the reception mode is selected as the WCDMA mode. Miyano teaches such feature (see abstract and figure 1 and corresponding paragraphs). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the reference to increase receiving gain.

Per claim 36, combination of Piri, Yu and Miyano further teaches that the mixers comprise: a first mixer for down converting a signal received by receivers receiving the bands of the WCDMA mode and the common bands of the WCDMA and GSM modes among the multiple modes and multiple bands; and a second mixer for down converting a signal received by receivers receiving the bands of the GSM mode and WCDMA diversity bands among the multiple modes and multiple bands (see figure 6A, and corresponding paragraphs of Piri).

#### ***Allowable Subject Matter***

5. Claims 37-42 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to YUWEN PAN whose telephone number is (571)272-7855. The examiner can normally be reached on 8-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duc Nguyen can be reached on 571-272-7503. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Yuwen Pan/  
Primary Examiner, Art Unit 2618